July-19-12 11:42:42 AM

Page 1

Item ID: D350-636-011 Accept *N900040100* Setup Start ¿Revision ID: Item Name: Skidtube LH Start Qty: 1.00 19/07/2012 **Start Date: Cust Item ID: Required Date:** 02/08/2012 **Req'd Qty:** 1.00 *1* **Customer:** Reference: Run Process Plan: MLJ Date: 17, 07 (Tooling: **Approvals:** Date: Stop QC: SPC (Y/N): Date: Date: Sequence ID/ Operation Tool ID Tool # Plan Set Up/ Reject Accept Reject Insp. **Work Center ID** Description Qty Number **Run Hours** Stamp Code **Draw Nbr Revision Nbr** D2750 100 0.00 MUJ 12/08/20 DOCUMENT CONTROL *100*

Document Control

DC

Photocopy blue file and type labels per PPP D350-636-011 CHG 006

Memo

0.00

NCR:	Yes / No				WORK ORDER NON-G	cor	NFORI	MANCE / UP	DATE	DQA:			
Work Ord	or:				DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part I	Part No. NCR No. Root Desc				Rework Scrap Use-as-is Work Order Update	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Èngiņeering Quality Other		
Root				Descri	ption of work order update		nitial	Ac	tion	Sign &			
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector	
Doc/Data												*	
Equip/Tooling					1								
Operator												<u> </u>	
Material													
Setup	-		ł										
Other													
Process						-					-		
Supplier											,		
Training										:		3	
Unapproved													
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Landi	ng Gear				General					_			
	Bending				Bend		Grain			Ovalized		Pressure/Forced	
	Centre N	ot Conce	ntric to C)/S	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure	
	Cracks				Broken/Damaged		Inspecti	on incomplete		Part Incorred	ct	Weld	
	Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
	Cuffs	14.			Contamination		Mainte	nance		Part Moved			
	Heat Trea	at			Countersink		Mislabe	led		Positioned V	Vrong	_	
	Inspectio	n Strip in	Tube		Cut Too Short		Misread			Power Loss/	Surge	Other	
	Ripples ir	n Bend			Drill Holes		Offset		<u> </u>	_	·		
					Out of C	Calibration							

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

July-19-12 11:42:42 AM

Item ID: Revision ID: Item Name:	D350-636-0 Skidtube LH	11		Accept	*N90	0040	100) *	Setup Star Stop	1.71	S1*
Start Date: Required Date: Reference:	19/07/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Iter					N	5 /
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):	. 4 2	Date:		Ī	Run Star Stoj	1/	R1* R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours 0.00	Tool II	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 Skidtubes Skidtubes		AFT end pe 3- Drill pilo deburr. 4- Locate D fitting 5- Drill only 6- Drill pilo Jig DT8150 7- Clecko D ***SECON 8-Open up h location holes for gro	WD and AFT ends, ren r dwg D2750 t holes for blade fitting T8330 off of blade fitting t two fwd step holes us t holes as per Dwg D27 & DT8863A for first s VT8863B on second sid D SIDE*** noles for Detail B to 0. es to 0.500" (total of 4 bound handling and deta	0.00 nove bending marks. Scribe bolt holes using DT8983. (ng bolt holes and drill pilot ing DT9616. Ensure proper (50 sheet 4 (D2750-1 detail ide only DT8863B for seco e of tube and drill pilot hole (375" (4 holes per side) and I holes per side) as per dwg I il C to 0.500" (8 holes per si	Open to 0.500", holes for blade positioning. s).Drill using drill and side (detail B) es for detail B. blade fitting D2750 .Open up side)			###	12/07	/23	

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

NCR:	Yes	/	No
		,	1.00

									A 42-1	DQA:	Date:		
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORI	MANCE / UPDATE			***	
										QA Closed:	Date:		
Vork Ord	ler:					DISPOSITION			AGAINST DEPARTMENT/PROCESS				
						Rework]		Skid-tube Crosstube		Water Jet	Engineering	
Part	No.					Scrap	4		Machining Small Fab		d. Eng. Coor.	Quality	
NCR	No.				·	Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite			Rec/Stol	re/Packaging Supplier	Other		
Root					Desci	ription of work order update	T	Initial	Action	Sign &	· ·		
Cause		Date	Step	Qty		or Non-conformance	Cr	nief Eng	Description	Date	Verification	QC Inspector	
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	<u> </u>	Bending				Bend		Grain	ļ	Ovalized		Pressure/Forced	
	_	Centre No	t Concen	itric to	o/s	BOM/Route		Hardwa		Over/Under		Temperature/Cure	
		Cracks				Broken/Damaged		4 '	on Incomplete	Part Incorre	——	Weld	
	L	Crushed/0	Crimped.		•	Burrs		Instruct	ions Incomplete/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
		Cuffs			_	Contamination		Mainte	nance	Part Moved			
		Heat Trea	t	1		Countersink		Mislabe	led	Positioned V	Vrong		
		Inspection	Strip in	Tube		Cut Too Short		Misread	Ĺ	Power Loss/	Surge	Other	
		Ripples in	Bend			Drill Holes		Offset					
	Torque Waves in Extrusion Drawing					Drawing	Out of Calibration						
		Turning Se	equence			Finish		Out of S	equence				

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

July-19-12 11:42:42 AM D350-636-011 Accept Item ID: Setup Start **Revision ID:** Skidtube LH . Item Name: Start Qty: 1.00 **Start Date:** 19/07/2012 **Cust Item ID: Required Date:** 02/08/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Start Process Plan: Date: Tooling: Date: Approvals: Stop QC: Date: Date: SPC (Y/N): Operation Sequence ID/ Reject Tool ID Tool # Plan Reject Set Up/ Accept Insp. **Work Center ID** Qty Qty Number Stamp **Description Run Hours** Code 11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 A/R Aluminum Rod batch: M1221.30 12-Grind welds flush as per Dwg D2750 5 B12/07/24 0.00 120 QC10- Inspect visual per QSI004- ground welds QC Memo Quality Control 130 QC5- Inspect part completeness to step on W/O

OC

120

Memo

Quality Control

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFOR	MANCE / UPDATE				10 £
		•							•		QA Closed:	Date:	
Work Ord	ler.			*		DISPOSITION			AGAINS	ST DE	PARTMENT	PROCESS	•
Work Ord	ici.					Rework	1		Skid-tube Crosstut	ne l	1	Water Jet	Engineering
Part	No.					Scrap	1		Machining Small Fa		Pro	d. Eng. Coor.	Quality
						Use-as-is	1		noforming Finishir		-	e/Packaging	Other
NCR	No.					Work Order Update	1		Large Fab Composi	te		Supplier	
Root						ption of work order update		Initial	Action		Sign &		
Cause	,	Date	Step	Qty	(or Non-conformance	Cr	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data													
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		Bending				Bend		Grain		L	Ovalized		Pressure/Forced
	Ш	Centre No	t Concer	ntric to (o/s	BOM/Route		Hardwa	re	L	Over/Under	tolerance	Temperature/Cure
	Ш	Cracks				Broken/Damaged		Inspecti	on Incomplete	L	Part Incorred	t	Weld
		Crushed/0	Crimped.			Burrs		Instruct	ions Incomplete/Unclear		Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	t			Countersink		Mislabe	led		Positioned V	V rong	_
		Inspection	Strip in	Tube		Cut Too Short	Г	Misread		Г	Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence
Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Work Order ID 87941

Memo

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Quality Control

Page 4

Item ID: D350-636-011 Accept Setup Start **Revision ID:** Skidtube LH Item Name: 19/07/2012 Start Qty: 1.00 **Start Date: Cust Item ID: Required Date:** 02/08/2012 Reg'd Oty: 1.00 **Customer:** Reference: Run **Process Plan:** Date: **Approvals:** Tooling: Date: Stop QC: SPC (Y/N): Date: Date: Sequence ID/ Operation Reject Set Up/ Tool ID Tool # Plan Accept Reject Insp. **Work Center ID** Number **Description** Qty Qty Stamp **Run Hours** Code 140 Chemical Conversion Coat per QSI005 4.1 0.00 *140* HandFinish 0.00 Memo Hand Finishing 150 QC7-Inspect Chemical Conversion Coat 0.00 1 0 12-07-2. *150* QC 0.00

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	•	DQA:	Date:	• •
ICD: V / N-	WORK ORDER NON-CONFORMANCE / UPDATE			*
ICR: Yes / No	WURK URDER NUN-CUNFURIVIANCE / UPDATE			•

											QA Closed:	Date	•
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part N	 No					Rework Scrap Use-as-is Work Order Update		ı	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update	I	nitial	Ac	tion	Sign &	-i - ·	
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								Ü					
· ·			<u> </u>		1	F	AUL	T CATE	GORY				
Landir	ng Ge	ar				General							
Bending Centre Not Concentric to O/S BOM/Route Cracks Broken/Dan Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Drill Holes			BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/I nance led	Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing /rong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other			
	Tı	urning Se	equence			Finish		Out of S	Sequence				
I	ļ۷	/ave/Twi	st in Tub	e		Folio		Outside	Dimensions				

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Work Order ID 87941

July-19-12 11:42:42 AM

87941

Item ID: Revision ID: Item Name:	D350-636-01			Accept		0040100)* s	Setup Start	1/1/2
Start Date: Required Date: Reference:	19/07/2012 02/08/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item Customer:				1 U. 37
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		Pate:	F	Run Start Stop	"NRT"
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours 0.00	Tool ID	Tool # Plan Code	Accept Qty	Reject Qty	Reject Insp. Number Stamp
160 Skidtubes		Skidtubes Memo		0.00			: -		
Skidtubes		side) as per dwg 2-Open up as per dwg 3- Open flo 4-Chamfer (welding in 5-Deburr ar 6- Prepare t 7-Bond wel A/R Sik 8- Weld spa (welding in A/R Alum 9- At sectio	holes of Detail B to 0.750" (t D2750. at hole to 0.500" (4 per side) holes of Detail B, C, ground structions on sheet 8) ad blow out all chips from insube for welding, remove alocations on the property of	handling and float holes for tube line as required. D27 (30) D2743 as per dwg D2 122130 er to 0.404"	les per dwg D2750		B(2)	107/25	

		4	
DOA	Date:		
DQA:	Date.		· ·

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

										QA Closed:	Dat	te:
Work Orde	er:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	•
Part N	lo.				Rework Scrap Use-as-is Work Order Update	rap Machining Small Fab			Small Fab Finishing	4	Water Jet d. Eng. Coor re/Packaging Supplier	
Root		<u> </u>		Descri	tion of work order update	Ini	tial	Δς	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	4	f Eng		ription	Date	Verificatio	n QC Inspector
Doc/Data	Date	эсер	Qty		or ron-comormance	Cilic	LIIE	Desc	приоп	Date	Vermeation	· QC IIISPECTOI
Equip/Tooling		1								İ		
Operator	\dashv											
Material	┪							a a				
Setup												
Other						1						
Process	7											
Supplier												
Training												
Unapproved												
	In				F/	AULT	CATE	GORY		•		
Landin	g Gear				General							
	Bending				Bend	$\prod G$	rain			Ovalized		Pressure/Forced
	Centre No	ot Concer	ntric to (o/s	BOM/Route	Пн	ardwa	re		Over/Under	tolerance	Temperature/Cure
1	Cracks				Broken/Damaged	In	specti	on Incomplete		Part Incorred	ct	Weld
ſ	Crushed/	Crimped.			Burrs	In	struct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
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ſ	Heat Trea	it			Countersink	Пм	1islabe	led		Positioned V	Vrong	
	Inspection	n Strip in	Tube		Cut Too Short	М	lisread	t		Power Loss/	Surge	Other
	Ripples in	Bend			Drill Holes		ffset		L			
	Torque W	aves in E	xtrusior	,	Drawing		ut of C	Calibration				
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					Folio	Outside Dimensions						

Quality Control

Work	Order	ID	87941
VVOIN	Oiuci		U/27.1

87941

Page 6

July-19-12 11:42:42 AM D350-636-011 Item ID: Accept *N900040100* Setup Start **Revision ID:** · Item Name: Skidtube LH Start Qty: 1.00 **Start Date:** 19/07/2012 **Cust Item ID: Required Date:** 02/08/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Process Plan: **Approvals:** Date: Date: Tooling: Stop Date: OC: SPC (Y/N): Date: Sequence ID/ Operation Tool # Plan Set Up/ Tool ID Reject Accept Reject Insp. Work Center ID Description Code Qty Qty **Run Hours** Number Stamp 11-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12-Deburr holes 170 QC10- Inspect visual per QSI004- ground welds *170* OC 0.00 Memo Quality Control 180 QC5- Inspect part completeness to step on W/O 0.00 *180* QC Memo

DQA:	Date:	•	,
-		4	

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

	,									QA Closed:	Dat	te:
Work Orde	ar:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	•
Work Orde					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo				Scrap	1 1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
raicis	····	-			Use-as-is	┨		noforming	Finishing		re/Packaging	Other
NCR N	io.				Work Order Update	1 '		Large Fab	Composite	1100	Supplier	
			- 		Work order opadie_	'		20.86 (00	composite		ouppe.[
Root				Descri	ption of work order update	Init	tial	Ac	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chief	f Eng	Desc	ription	Date	Verification	n QC Inspector
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Supplier												
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Landin	ng Gear				General							
	Bending				Bend	G	rain			Ovalized	[Pressure/Forced
	Centre No	ot Concer	ntric to (o/s	BOM/Route	На	ardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	In:	specti	on Incomplete		Part Incorred	ct	Weld
	Crushed/	Crimped.			Burrs	ln:	struct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs				Contamination	Пм	ainte	nance		Part Moved	•	<u></u>
	Heat Treat				Countersink	М	islabe	led		Positioned V	Vrong	
Inspection Strip in Tube			Cut Too Short	М	isread			Power Loss/	Surge	Other		
			Drill Holes	Of	fset			•	•			
Torque Waves in Extrusion Drawing				Drawing	O	ut of C	alibration					
Turning Sequence Finish					Finish	O	ut of S	equence				
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Quality Control

July-19-12 11:42:42 AM D350-636-011 Item ID: Accept *N900040100* Setup Start Revision ID: Skidtube LH · Item Name: Start Qty: 1.00 Start Date: 19/07/2012 **Cust Item ID: Required Date:** 02/08/2012 Rea'd Otv: 1.00 **Customer:** Reference: Run **Process Plan: Tooling:** Approvals: Date: Date: Stop QC: SPC (Y/N): Date: Date: Reject Sequence ID/ Tool ID Tool# Operation Set Up/ Plan Accept Reject Insp. Work Center ID Number **Description** Code **Qty** Qty Stamp **Run Hours** 190 Pressure Wash per OSI005 4.3 0.00 1 7/6 12.8.7 *190* HandFinish 0.00 Memo Hand Finishing Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch. 200 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 0.00 *200* Powdercoat 0.00 Memo Powder Coating M121481/ OVEN TEMPERATURE: FINISH TIME: 3600 210 QC3- Inspect Part Finish 0.00 ILH & Il Mosliy

0.00

Memo

Inspect for foreign object per QSI 024

										DQA:	Date	:
NCR:	Yes / No				WORK ORDER NON-O	COI	NFORI	MANCE / UPDATE		•		•
							·			QA Closed:	Date	:
Work Ord	or:				DISPOSITION			AGAINS	T DE	PARTMENT	PROCESS	•
WORK Ord	eı				Rework	1		Skid-tube Crosstub		1	Water Jet	Engineering .
Part I	No				Scrap			Machining Small Fa		Prod	d. Eng. Coor.	Quality
1 4101					Use-as-is	1		noforming Finishir		4	e/Packaging	Other
NCR I	No.				Work Order Update	1		Large Fab Composit	~ 	1	Supplier	1
						1						
Root				Descri	ption of work order update	1	Initial	Action		Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
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Landi	ng Gear				General	AUL	LICATE	GORT				
Lanus					Bend	Г	Grain		Г	Ovalized	Г	Pressure/Forced
	Bending Centre Not Concentric to O/S				BOM/Route	\vdash	Hardwa	re	\vdash	Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	<u> </u>	4	on Incomplete	\vdash	Part Incorrec		Weld
		/Crimped		-	Burrs		1 '	ions Incomplete/Unclear		Part Lost/Mi	 	Wrong Stock Pulled
	Crushed/Crimped. Cuffs				Contamination	\vdash	Mainte		-	Part Moved		
	Heat Treat				Countersink					Positioned W	/rong	

Misread

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 87941

July-19-12 11:42:42 AM

Item ID: Revision ID: Item Name:	D350-636-01 Skidtube LH	11		Accept	*N90	0040	10	n * '	Setup Sta Sto	10.	\$1* \$2*
Start Date: Required Date: Reference:	19/07/2012 02/08/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Ite Custom					141	17
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		Date:		I	Run Sta Sto	" \ 	R1* R2*
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool I	D Tool#	Plan Code	Accept Qty	Reject Qty		Insp. Stamp
*220 *220* HandFinish Hand Finishing		HandFinishing Memo I - Install ins	serts as per Dwg D2750	0.00				(<u>h£</u> (4	Al u	108/14
²³⁰ *230*		HandFinishing		0.00				1 h H	k	Ju ala	08(04
HandFinish Hand Finishing		•	r Foreign Objects	0.00				: -			
		3-Install bla per dwg D2 SIKA FLEX BATCH:	750 (241 (1) (771) (0) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	batch: U A carshoes and ground handling D3492 and apply o'ring lub							

- 5-Coat all exposed fasteners with "LPS Procyon" batch: 111159 6

NCR:	·												
											QA Closed:	Da	te:
Work Ord	ler [.]					DISPOSITION			A	GAINST DE	PARTMENT	/PROCESS	•
Part NCR	No.					Rework Scrap Use-as-is Work Order Update		1	Machining Sn noforming Fi	osstube nall Fab inishing nposite		Water Jet d. Eng. Coor. re/Packaging Supplier	Quality Other
	-		T								6: 0		
Root		5.	<u> </u>			ption of work order update		Initial	Action		Sign &	Manifiantia	061000000
Cause	_	Date	Step	Qty	(or Non-conformance	- C	hief Eng	Description	1	Date	Verificatio	n QC Inspector
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Other *										•			
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Supplier						•							
Training							1						
Unapproved								:					
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		Centre No	ot Concer	ntric to O)/S	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/Unclea	r	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs					Contamination]Mainte	nance		Part Moved		
	Heat Treat					Countersink		Mislabe	led		Positioned V	Vrong	
		Inspection	n Strip in	Tube		Cut Too Short		Misread	l		Power Loss/	Surge	Other
	П	Ripples in	Bend			Drill Holes		Offset	•	<u></u>	•		
	Torque Waves in Extrusion					Drawing Out of Calibration							

Out of Sequence

Outside Dimensions

Date: _

DQA:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:42 AM

Quality Control

Item ID: D350-636-011 Accept *N900040100* Setup Start **Revision ID:** · Item Name: Skidtube LH 19/07/2012 Start Qty: 1.00 **Start Date: Cust Item ID: Required Date:** 02/08/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Approvals: **Process Plan: Tooling:** Date: Date: QC: Date: SPC (Y/N): Date: Sequence ID/ Tool ID **Operation** Tool # Plan Reject Set Up/ Accept Reject Insp. **Work Center ID** Description Qty Qty Number Stamp **Run Hours** Code 240 QC5- Inspect part completeness to step on W/O 0.00 *240* Memo Quality Control 250 Pick Kit 0.00 Packaging 0.00 Memo Packaging 260 QC4-100% Inspect kits for completeness *260* Memo

*****ensure antiseize is on AN8C21A bolts*

NCR:	· · · · · · · · · · · · · · · · · · ·												
											QA Closed:	Dat	e:
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	d+
Part f		-				Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other
NCN	···. —			.		work Order opdate	ا ا		raige rau	Composite	1	20ppiter [
Root					Descri	ption of work order update		nitial	Act	ion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш								:				
Operator													
Material	\square												
Setup	Щ												
Other	Н											:	
Process	\vdash												
Supplier	\mathbf{H}												
Training	H												
Unapproved				<u> </u>			<u> </u>	T CATE	SORY				
Landii	ng Ge	ar		- ····		General	HOL	CAIL	JON				
		ending				Bend		Grain			Ovalized	ſ	Pressure/Forced
	_	-	t Concer	ntric to (o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cr	acks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct T	Weld
	Cr	ushed/0	rimped.			Burrs			ions Incomplete/L	Inclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cı	uffs				Contamination		Mainte	nance		Part Moved	_	
	H	eat Treat	t			Countersink		Mislabe	led		Positioned V	Vrong	
	In	spection	Strip in	Tube		Cut Too Short		Misreac	t		Power Loss/	Surge [Other
	Ri	pples in	Bend			Drill Holes		Offset					
	Torque Waves in Extrusion					Drawing		Out of C	Calibration				
	Turning Sequence					Finish	Out of Sequence						

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

87941

July-19-12 11:42:42 AM

Item ID: D350-636-011

Revision ID:

Skidtube LH · Item Name:

Start Date: Required Date: 02/08/2012

19/07/2012

Start Qty: 1.00 Req'd Qty: 1.00

1

1

Cust Item ID:

Customer:

Tool ID

Reference: _____

Approvals:

Process Plan:

QC:

Date: Date:

Accept

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date:

Date:

Tool#

N900040100

Accept

Qty

Plan

Code

Run Start

Reject

Qty

Setup Start

Stop

Reject

Number Stamp

Insp.

Sequence ID/ Work Center ID

270 *270*

Packaging

Packaging

Packaging

Operation

Description

Memo

Package as per PPP D350-636-011

QC21- Final Inspection - Work Order Release

280

QC Quality Control

Memo

0.00

0.00

MLJ 12/08/22 MLJ 12/08/27

											DQA:	Date	e:
NCR:	Yes	/ No				WORK ORDER NON-C	100	NFOR	MANCE / UPDAT	Έ	•		•
											QA Closed:	Dat	e:
Work Ord	er.		2			DISPOSITION			ı	AGAINST DE	PARTMENT	PROCESS	d
Part I	No.					Rework Scrap Use-as-is Work Order Update		l .	Machining S	rosstube mall Fab Finishing mposite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other
Root					Descri	ption of work order update	ı	Initial	Action		Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descriptio	on	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator											:	:	
Material													
Setup									•				}
Other													
Process													
Supplier													
Training			ļ										
Unapproved													
						F/	AUL	T CATE	GORY				
Landi	ng G	ear				General		_				_	
		Bending				Bend		Grain			Ovalized	[Pressure/Forced
	Centre Not Concentric to O/S				o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct [Weld
	Crushed/Crimped.					Burrs		Instruct	ions Incomplete/Uncle	ar	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs					Contamination		Mainte	nance		Part Moved	_	
	Heat Treat					Countersink		Mislabe	led		Positioned V	Vrong	
	Inspection Strip in Tube					Cut Too Short		Misread	1		Power Loss/	Surge	Other
	Ripples in Bend					Drill Holes	Offset						

Out of Calibration Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

Picklist Print

July-19-12 11:42:46 AM

Work Order ID: 87941

87941

Parent Item:

D350-636-011

D350-636-011

Parent Item Name:

Skidtube LH

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:I 02.09.25 Rearranged procedure steps KJ

ŧ

IPP Rev:J 06-03-23

As per Rev D

IPP Rev:K 06-07.13

As per dsi9343 EC

IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC

IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:EC

IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec

DD verf:EC

IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010

seq110 DD verf:EC

IPP Rev:P 10.06.22 revise IPP Rev:Q 10.10.01 as per IIN revH

DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	-
D3492-1		Manufactured	No			230	Each	149.0000	8	8				_
D3492-1									**	H	ala	1130	4	

	j	7	+:	4	/	_
Phic	,					

Plug

		Location		Loc	• Qty	Loc Code					
		FP002			142						
		69	9531		8			_			
		7-	4444		2			_			
		70	6235		4			_			
		83	3259		128						
		FP-A			7			_	yε		
		83	3098		7			_			
Manufactured	No			230	Each	199.0000	1	8	8		
							**		!!	1/80/1	4

D3492-3

Plug

D3492-3

<u>Locatio</u>	<u>n</u>	Loc Oty	Loc Code	
FP-A		199		
	81967	5		
	83099	11		
	83529	75		
	<u>85461</u>	108		X &

NCR:	CR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
				··· ••						QA Closed:	Dat	e:	
Work Ord	er:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	•	
Part I	No				Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other	
Root				Descri	ption of work order update	I	nitial	Act	ion	Sign &			
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector	
Doc/Data													
Equip/Tooling													
Operator										,			
Material													
Setup		ŀ								 			
Other										•			
Process		1											
Supplier													
Training													
Unapproved							·						
						AUL	T CATE	GORY					
Landi	ng Gear			_	General		ŀ			1	_		
	Bending			<u> </u>	Bend	Ш	Grain			Ovalized	1	Pressure/Forced	
		lot Conce	ntric to	o/s	BOM/Route		Hardwa			Over/Under	-	Temperature/Cure	
	Cracks			<u> </u>	Broken/Damaged	Ш		on Incomplete		Part Incorred	-	Weld	
		/Crimped		ļ	Burrs	Ш		ions Incomplete/U	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
	Cuffs			<u> </u>	Contamination		Mainte			Part Moved			
	Heat Tre			<u> </u>	Countersink		Mislabe			Positioned V			
		on Strip in	Tube	<u> </u>	Cut Too Short	Ш	Misread	!		Power Loss/	Surge	Other	
Ripples in Bend			Drill Holes	Ш	Offset								
ı	Torque Waves in Extrusion			n	Drawing	Out of Calibration							

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

July-19-12 11:42:46 AM

Work Order ID: 87941

D350-636-011

Parent Item Name: Skidtube LH

87941

D350-636-011

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Parent Item:

Purchased

No

230

Each

360.0000

**

Al intoglia

*N	IΑ	S	1(h.	1	1	_(1	()"	•
O-RIN	lG										

					ノヽヘ	1 L'
<u>Location</u>	Loc C	<u>Oty</u>	Loc Code			
FP001		360				_
110915		14				_
117460		8				_
118077		1				
118612		3				_
119438		47				_
121259		2				
121584		2				
121723		15				
122151		268			$-\times^{o}$	_
	250	Each	207.0000	2	2 0	

NAS1149D0863J

Purchased

No

**

51 12/2/20

S1149D0863.I*

WASHER

Location	<u>n</u>	<u>Lo</u>	c Oty	Loc Code
ST298			207	
	118078		34	
	119307		1	
	120308		72	
	121556		100	
		110	Each	53.0000

D2744

Manufactured No

**

Loc Code

BED/07/21

D2744

Location Loc Qty LG002 53 62715 83412 14 85506 38

July-19-12 11:42:46 AM

Shop Packet Print

Page 2

NCR:	·													
											QA Closed:	Date	:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT,	PROCESS		
Part No						Rework Scrap Use-as-is Work Order Update Skid-tube Machining Small Fab Thermoforming Large Fab Composite			Pro Rec/Stor	Engineering . Quality Other				
Root					Descri	ption of work order update	T	Initial	Action		Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Cł	nief Eng	Descri	ption	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved				·				LT CATEC						
Landir	20 G	ioar .					AUI	LICATE	JORT					
	Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion					General Bend Grain BOM/Route Hardware Broken/Damaged Inspection Incomplete Burrs Instructions Incomplete/Uncle Contamination Maintenance Countersink Mislabeled Cut Too Short Misread Drill Holes Offset Drawing Out of Calibration				nclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned W Power Loss/	et ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

July-19-12 11:42:46 AM

Work Order ID: 87941

D350-636-011

Parent Item Name: Skidtube LH

87941

D350-636-011

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Parent Item:

Manufactured

No

110

Each 26 0000

3 12/07/23

D2600-3-BENT

Location	Lo	c Qty	Loc Code		
LG		26			
66875		7			
73253		1			
75021		1			
75022		1			
75023		1			
81330		4			
83305		1			
86330		10			
	160	Each	230,0000	8	Q

D2743

Manufactured

**

BE12/07/26

Crossbolt Spacer

Location	Loc Qty	Loc Code	
Location	Loc Oty	Luc Code	
LG	156		
81965	23		
83262	7		<u></u>
85459	126		
LG001	74		
67766	4		
68251	3		
73403	64		
74445	1		
79517	2		

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
								···		QA Closed:	Date:	
ler:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	•
Part No NCR No Root Descr					Rework Scrap Use-as-is Work Order Update	Machining Small Fab S-is Thermoforming Finishing			Finishing	_	· ·	Engineering . Quality Other
	Date	Step	Qty		•					Sign & Date	Verification	QC Inspector
					F	AUL	T CATE	GORY				
Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Broker Burrs Contan Contan Counte					BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Inspecti Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/ nance led	'Unclear	Part Incorred Part Lost/Mi Part Moved Positioned W	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	No.	ng Gear Bending Centre No Cracks Crushed/C Cuffs Heat Trea Inspection Ripples in	ng Gear Bending Centre Not Concer Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Ripples in Bend	ng Gear Bending Centre Not Concentric to C Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend	Ing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend	Per:	Part	Principles in Bend Grain Bending Centre Not Concentric to O/S Broken/Damaged Instruct Cuffs Countersink Countersink Countersink Countersink Countersink Cut Too Short Cuffset Cut Too Short Cuffset Cut Too Short Cuffset Cut Too Short Coffset Coffset Coffset Cut Too Short Coffset Cut Too Short Coffset Coff	Ier: No. No. Disposition Rework Scrap Use-as-is Work Order Update Date Step Qty Description of work order update or Non-conformance FAULT CATEGORY General Bending Centre Not Concentric to O/S Cracks Cracks Cracks Crushed/Crimped. Burrs Countersink Cut Too Short Inspection Strip in Tube Ripples in Bend Disposition Rework Skid-tube Machining Thermoforming Large Fab AC Chief Eng Description of work order update or Non-conformance FAULT CATEGORY General Bending Crain Hardware Inspection Incomplete Maintenance Mislabeled Misread Offset	Per:	AGAINST DEPARTMENT, Rework Scrap Use-as-is Work Order Update Use-as-is Work Order Update Chief Eng Description Date Date Step Qty Description of work order update or Non-conformance Chief Eng Description Date	DISPOSITION Rework Skid-tube Crosstube Water Jet No.

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:47 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

Manufactured

Manufactured

No

No

87941 *D350-636-011*

Start Date: 19/07/2012

Required Date: 02/08/2012

Page 4

Start Qty: 1.00

Required Qty: 1.00

D2739 Manufactured No 160 Each 15.0000 *D2739* 350 1 Beam

Location	<u>I</u>	oc Qty	Loc Code		
LG		15			
72155	;	1			
81508	}	1			
83448	}	1			
83548	1	1			
85486	•	1			
85487	•	4			
86437	\supset	4			
86615		2			
	160	Each	46.0000	4	4

D3490-3

Cross Bolt Spacer

Location Loc Qty Loc Code LG001 46 85420 46 160 51.0000 Each

Cross Bolt Spacer

D3490-1

Location Loc Qty Loc Code LG 42 81976 85419 40

LG001 9 62450 74875 77042

**

**

											DC	QA:	Date	e: _	·
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UF	PDATE					•
_											QA Close	ed:	Date	e:	
Work Ord	or.					DISPOSITION				AGAINST DE	PARTME	NT/	PROCESS		•
Part I						Rework Scrap Use-as-is	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing			4		Water Jet I. Eng. Coor. e/Packaging		Engineering . Quality Other	
NCR I	No.				<u></u>	1			Large Fab Composite Supplier						
Root					Descri	ption of work order update		Initial	Ad	ction	Sign &				
Cause		Date	Step	Qty	(or Non-conformance	Cr	nief Eng	Desc	cription	Date		Verification		QC Inspector
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other														-1	
Process															
Supplier															
Training												ļ			
Unapproved							<u>. </u>						·		
						F	AUL	LT CATE	GORY						
Landi	ng G	ear				General		_		-	-		_	_	
		Bending				Bend		Grain			Ovalized			_	Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Un	der t	olerance	_	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Inco	rrect	t L		Weld
	Crushed/Crimped.					Burrs		Instruct	ions Incomplete,	/Unclear	Part Lost,	/Mis	sing		Wrong Stock Pulled
	Cuffs					Contamination		Mainte	intenance Part Moved						
	Heat Treat					Countersink	untersink Mislabeled			Positioned Wrong					
	Inspection Strip in Tube					Cut Too Short	Misread				Power Lo	ss/S	urge		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:47 AM

Work Order ID: 87941

D350-636-011

Parent Item Name: Skidtube LH

Parent Item:

87941

D350-636-011

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

220

Each

2,462.000

12/08/14

AI S4-1032-225

Location	<u>on</u>	Lo	e Qty	Loc Code		
FP-B			2019			
	122290		2019			
ST281			420			X 3 8
	108696		146			
	110768		62			
	118386		55			
	118966		68			
	121269		89			
ST282			23			
	120410		10			
	120451		13			
		230	Each	34.0000	1	1

D3793-3

Wearshoe

D3793-3

Manufactured

No

**

11 1208/14

Location Loc Code Loc Qty FP001 34 83394 10 83901 12 87135 12

July-19-12 11:42:47 AM

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE													•	
<i>-</i>											QA Closed:	Da	ite:	
Work Ord	ler: ˌ					DISPOSITION	7			_	EPARTMENT	/PROCESS Water Jet		
Part NCR			•			Use-as-is Thermoformi			Machining Small Fab Prod. Eng. Coor. Qua			Engineering . Quality Other		
Root Cause	Date Step Qty				1	ption of work order update or Non-conformance	- 1	Initial hief Eng	Action Description		Sign & Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved				,										
							FAUI	LT CATE	GORY					
Landi	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Wayes in Extrusion					General Bend Grain BOM/Route Hardware Broken/Damaged Inspection Incomplete Burrs Instructions Incomplete/Unclear Contamination Maintenance Countersink Mislabeled Cut Too Short Misread Drill Holes Offset					Ovalized Over/Under Part Incorre Part Lost/Mi Part Moved Positioned V Power Loss/	ct ssing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
1	Torque Waves in Extrusion				n I	Drawing	1	IOut of C	alibration					

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

July-19-12 11:42:47 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941 *D350-636-011*

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

						Suit Qty.		tequired Qty. 1.00
AN8C35A	Purchased	No		230 Eac	h 53.00	00 1	1	
AN8C35A						**	M T	108/14
			Location	Loc Qty	Loc Co	<u>de</u>		
			FP002	52				
			115960	1				
			118286	1				
			121275	50				
			ST346	1				
			114442	0				
			115188	0			- <u></u> -	
			115960	1				
D3793-1	Manufactured	No		230 Eac	n 31.00	00 1	1	
D3793-1 Wearshoe						**	Ml	20814
			Location	Loc Qty	Loc Co	<u>de</u>		
			FP001	31				
			82171	2				
			83393	4				
			83903 87273	13			<u></u> <u>x</u> (
			87273	12				
D3488-041	Manufactured	No		230 Eacl	n 25.006	00 1	1	
D3488-041 Blade Fitting Assembly, LH						**	JIL.	2/08/14
			Location	Loc Qty	Loc Co	<u>de</u>		
•			FP001	8				
			85807	8				
			FP002	17				

10

83407

85733

											DQA	: Dat	e: _	
NCR:	Yes	/ No				WORK ORDER NON-O	NFOR	PDATE		•	_	•		
											QA Closed	: Dat	e:	
Work Ord	or:					DISPOSITION				AGAINST DE	PARTMENT	r/PROCESS		•
Part I	No.					Rework Skid-tube Crosstube Machining Small Fab Use-as-is Thermoforming Finishing			4	Water Jet od. Eng. Coor. ore/Packaging		Engineering . Quality Other		
NCR I	No.					Work Order Update Large Fab Composite			Supplier					
Root					Descri	ption of work order update		Initial	Ad	ction	Sign &			
Cause		Date	Step	Qty	C	or Non-conformance	Cł	nief Eng	Desc	cription	Date	Verification		QC Inspector
Doc/Data														
Equip/Tooling														
Operator									<u>-</u>					
Material														
Setup														
Other														
Process														
Supplier												1		
Training							}					1		
Unapproved														
						F	AUL	LT CATE	GORY					
Landi	ng G	iear				General		-			_	_		
		Bending				Bend		Grain			Ovalized			Pressure/Forced
1	Centre Not Concentric to O/S BOM/					BOM/Route	L	Hardwa	re		Over/Unde	r tolerance		Temperature/Cure
	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ect		Weld
	Crushed/Crimped.					Burrs		Instruct	ions Incomplete	/Unclear	Part Lost/N	lissing]·	Wrong Stock Pulled
	Cuffs					Contamination		Mainte	nance		Part Moved	1		
	Heat Treat					Countersink		Mislabe	led		Positioned Wrong			
	Inspection Strip in Tube					Cut Too Short	Misread				Power Loss	/Surge	7	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

July-19-12 11:42:47 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941 *D350-636-011*

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-3

D3794-3

Manufactured

Purchased

230

Each

38.0000

**

11/80/14 LU

	Location	Loc C	<u>)ty</u>	Loc Code		
	FP		12			
	83396		12			Y\
	FP002		26			
	74530		2			
	86243		24			
No		230	Each	76.0000	4	4

AN6C44A

BOLT

AN6C44A

Location Loc Qty Loc Code FG 2 2 103964 ST343 74

> 121013 11 121440 13 122204 50

41/80/si Sel.

											DQA:	Date:	<u> </u>	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFOR	MANCE / UP	DATE			•	
		•				<u>.</u>			·		QA Closed:	Date:		
Work Order:						DISPOSITION AGAINST				AGAINST DE	DEPARTMENT/PROCESS .			
Part No.						Rework Scrap Use-as-is		Machining Small Fa		Crosstube Small Fab Finishing	-	Water Jet d. Eng. Coor. re/Packaging	Engineering . Quality Other	
NCR No.				Work Order Update	⊣ 1			Composite]	Supplier				
Root					Descri	ption of work order update		Initial	Act	tion	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector	
Doc/Data														
Equip/Tooling			}											
Operator														
Material			İ									ł		
Setup												Ì		
Other			İ											
Process													İ	
Supplier						•								
Training	Ш	·												
Unapproved				L			Ĺ							
						F.	AUL	T CATE	GORY					
Landi	ing G	Gear				General	_				-		-	
	Bending Bend					Bend	Bend Grain				Ovalized		Pressure/Forced	
	Centre Not Concentric to O/S BOM					BOM/Route	oute Hardware				Over/Under	tolerance	Temperature/Cure	
	Cracks					Broken/Damaged Inspection Incomplete					Part Incorre	ct	Weld	

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

Wrong Stock Pulled

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish

July-19-12 11:42:47 AM

Work Order ID: 87941 *87941* Parent Item: D350-636-011 *D350-636-011* Parent Item Name: Skidtube LH Required Date: 02/08/2012 **Start Date:** 19/07/2012 Start Qty: 1.00 Required Qty: 1.00 MS21083C8 Purchased No 230 Each 72 0000 *MS21083C8* 12/08/14 Location Loc Qty Loc Code 304 17 14 121185 121349 FP002 115884 ST303 115884 118077 119309 119638 ST321 50 122141 50 D3536-25 Manufactured No 230 Each 15.0000 12/08/11 *D3536-25* ** Gasket Location Loc Qty Loc Code FP 15 83900 15 D3631-1 230 227.0000 Manufactured Each 12/08/14 *D3631-1* Washer Location Loc Qty Loc Code FG 212 81874 2 83588 210 ST072 15 68062 2

13

75548

											DQA:	Date		
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFOR	MANCE / UP	DATE			•	
											QA Closed:	Date		
Work Ord	ler:					DISPOSITION				AGAINST DEPARTMENT/PROCESS				
Part	Part No. NCR No.					Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite		Small Fab Finishing	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering Quality Other	
Root					Descri	ption of work order update		Initial	Act	ion	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Cł	nief Eng	Descr	iption	Date	Verification	QC Inspector	
Doc/Data														
Equip/Tooling]												
Operator														
Material]												
Setup														
Other												: 		
Process														
Supplier]			1									
Training														
Unapproved														
						F	AUI	LT CATE	GORY					
Landi	ing (Gear				General		-			_		-	
	Bending Bend					Bend	L	Grain			Ovalized		Pressure/Forced	
	Centre Not Concentric to O/S					BOM/Route Hardwa		ware		Over/Under tolerance		Temperature/Cure		
	Cracks					Broken/Damaged	Inspection Incomplete			Part Incorre	ct	Weld		
	Crushed/Crimped.					Burrs		Instructions Incomplete/Unclear		Inclear	Part Lost/Mi	issing	Wrong Stock Pulled	
		Cuffs				Contamination		Mainte	nance		Part Moved			
		Heat Trea	t			Countersink		Mislabe	led		Positioned V	Vrong		
	Inspection Strip in Tube				<u> </u>	Cut Too Short		Misread			Power Loss/	Surge	Other	

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:47 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941

D350-636-011

Start Date: 19/07/2012

Required Date: 02/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3791-1

Wearplate

D3791-1

Manufactured

Purchased

Manufactured

No

No

No

230

Each

19.0000

LK

12/08/14

Location Loc Qty Loc Code FP002 19 62239 2 83392 83902 11 38 230 Each 21.0000 38

*AN960C101 * 🗸

washer

AN960C10L

M122063

Loc Qty Loc Code

> 21 21

10

(x38) 12 12 108 14

ST 107534

> 76142 83260

Location

230

Each 206.0000

**

12 12/08/14

Bushing

D2745

Location Loc Code Loc Qty FP 194 79518 85416 188 FP001 12 69529

July-19-12 11:42:47 AM

Shop Packet Print

Page 9

NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
											QA Closed:	Date	e:
Work Ord	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No						Rework Scrap Use-as-is Work Order Update	Machining Small Fab Thermoforming Finishing			Small Fab Finishing		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering . Quality Other
Root					Descri	ption of work order update	Т	Initial	Acti	ion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Cł	nief Eng	Descri	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		,											
			r				AUI	LT CATE	GORY				
Landi	B C C C C H	ending entre No racks rushed/C uffs eat Trea aspection ipples in	Crimped. t Strip in Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/U nance led	Inclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned W Power Loss/S	st ssing /rong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
į.	Torque Waves in Extrusion				'	Diaming	1	Jour of C	anoration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

July-19-12 11:42:47 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

Purchased

Manufactured

No

No

87941 *D350-636-011*

Start Date: 19/07/2012

1,335.000

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

12/08/14

34

Jel

AN3C5A

AN3C5A

**

230

Location	Loc Qty	Loc Code	
FP001	7 .		
115835	7		
ST350	1328		
116419	28		
117343	13		
117764	7		
117872	2		
119749	23		
120423	28		
121255	227		
121708	500		
<u>12214</u> 1	500		<u> </u>
	230 Each	125.0000 3	3
		**	41/80/s1 EC

Each

D3537-1 *D3537-1*

Wearpad

Location Loc Oty Loc Code FP002 125 83254 83255 3 85457 22 85458 44 86238 55

												DQA:	Da	te:	•
NCR:	Yes	/ No				WORK ORDER NON-	co	NFOR	MANCE / UP	DATE					
-			*****									QA Closed:	Da	te:	
Work Ord	lor:					DISPOSITION				AGAINST [ЭE	PARTMENT	PARTMENT/PROCESS .		
Work Old						Rework Skid-tube Crosstube			1	Water Jet		Engineering .			
Part	No.					Scrap		Machining	Small Fab		Prod. Eng. Coor.			Quality	
	-		·			1 ·			noforming	Finishing	_	4	re/Packaging		Other
NCR I	No.				/* · · · · · · · · · · · · · · · · · · ·	Work Order Update]		Large Fab	Composite	_]	Supplier		
	Т		1	-			<u> </u>	1 111 1				l c: 0			
Root		5.	.		,	otion of work order update		Initial		tion		Sign &	\		064
Cause	\dashv	Date	Step	Qty	C	or Non-conformance		hief Eng	Desc	ription		Date	Verificatio	n	QC Inspector
Doc/Data	Н						1								
Equip/Tooling	H						ļ								
Operator	Н						ļ								
Material	Н														
Setup	Н						1								
Other	H														
Process	Н														
Supplier Training	Н														
Unapproved	Н														
Опаррточец			1	<u> </u>			ΕΔΙΙΙ	LT CATE	GORY			1	l		
Landi	ng G	ear				General		er extre							
		Bending				Bend	Г	Grain			_	Ovalized		<u> </u>	Pressure/Forced
	-	Centre No	ot Concer	ntric to (BOM/Route	\vdash	Hardwa	re	<u> </u>	_	Over/Under	tolerance	<u> </u>	Temperature/Cure
	-	Cracks				Broken/Damaged	\vdash	4	on Incomplete	<u> </u>	_	Part Incorre			Weld
Crushed/Crimped.					Burrs		- 1 '	ions Incomplete/	Unclear –	_	Part Lost/Mi			Wrong Stock Pulled	
						Contamination		Mainte	•		_	Part Moved	J		1 0
Heat Treat				<u> </u>	Countersink		Mislabe		F	_	Positioned V	Vrong			
					Cut Too Short		Misread				Power Loss/	-		Other	
					Drill Holes		Offset		L	_	.	-			

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:47 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941 *D350-636-011*

Start Date: 19/07/2012

Loc Code

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0832R

Purchased

Purchased

No

230

Each

442.0000

12/08/14

NAS1149C0832R

AN3C6A

No

Location Loc Oty 296 200 122441 200 ST297 242 242 114915 230 Each

751.0000 **

AN3C6A **BOLT**

Location	Loc Qty	Loc Code
FP001	1	
111982	1	
ST351	750	
111982	2	
116419	23	
116549	2	
116704	12	
117619	10	
117688	1	
117872	5	
118422	13	
119449	21	
120423	3	
120693	112	
121682	46	

500

122416

		DQA:	Date:	•	
NCR: Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			•	•
	· · · · · · · · · · · · · · · · · · ·	OA Clasadi	Data		

										QA CIOSCO.		· · · · · · · · · · · · · · · · · · ·		
Work Orde	r:				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
				•	Rework	1		Skid-tube	Crosstube]	Water Jet	Engineering .		
Part N	n				Scrap	1 1	1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
1 41111	·				Use-as-is			noforming	Finishing	4	re/Packaging	Other		
NCR N	0				Work Order Update		THETH	Large Fab	Composite	1100,0101	Supplier	→ →		
nen n	·				Work order opadice	'		Earge (ab	Composite_	j	Supplies			
Root				Descri	ption of work order update	ate Initial		Ac	tion	Sign &				
Cause	Date	Step	Qty	(or Non-conformance	Chie	ef Eng	Desc	ription	Date	Verification	QC Inspector		
Doc/Data														
Equip/Tooling														
Operator											-			
Material														
Setup			į.											
Other														
Process														
Supplier														
Training		1												
Unapproved						Į								
	<u> </u>				F.A	AULT	CATE	GORY		A				
Landin	g Gear				General									
Γ	Bending				Bend	\Box	Grain			Ovalized	Γ	Pressure/Forced		
	Centre N	ot Concer	ntric to (o/s	BOM/Route	H٠	Hardwa	re		Over/Under	tolerance	Temperature/Cure		
	Cracks				Broken/Damaged	l l	nspecti	on Incomplete		Part Incorred	ct .	Weld		
	Crushed/	Crimped.			Burrs			ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled		
	Cuffs	•			Contamination	-	Mainte			Part Moved		-		
F	Heat Treat Countersink			—	∕Iislabe			Positioned V	Vrong					
ļ	Inspectio		Tube	Cut Too Short			∕lisreac			Power Loss/		Other		
İ	Ripples in Bend Drill Holes			\Box	Offset		L							
<u> </u>	Torque Waves in Extrusion Drawing			—	Out of Calibration									
	Turning Sequence Finish			_	П	Out of Sequence								
	Wave/Twist in Tube				Folio	П	Outside Dimensions			·				

July-19-12 11:42:48 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941 *D350-636-011*

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-013

NAS1611-013

Purchased

Manufactured

Manufactured

No

No

No

230

264 0000 Each

**

**

**

H/80/51 LK

Location Loc Oty Loc Code FP001 264 116582 5 117291 2 117887 53 119623 36 121825 126 121826 42 230 Each 25.0000

D3535-25

D3535-25

Wearshoe

Location	Loc Qty		Loc Code
FP001	25	5	
62233	i	i	
81357	1	i	
<u>83387</u>	16	ó	
83899	7	7	
	230 1	Fach	17 0000

D3794-1

Gasket

D3794-1

Location Loc Qty Loc Code FP002 17 83395 17

JI 11/08/14

July-19-12 11:42:48 AM

NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
											QA Closed:	Date	á:
Work Ord	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	•
Part No. NCR No.						Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering . Quality Other
Root					Descri	ption of work order update	Π	Initial	Act	tion	Sign &		
Cause	.	Date	Step	Qty		or Non-conformance	Ct	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling	Ш		•										
Operator	Ц												
Material	Ш												
Setup	Щ												
Other	Ц												
Process	Ш	•											
Supplier	Ш												
Training	Ш												
Unapproved													
							AUL	T CATE	GORY				
Landi						General		1		<u></u>	٦	Г	-
	-	Bending			_	Bend	-	Grain		_	Ovalized		Pressure/Forced
	\vdash	Centre No	ot Concer	ntric to	O/S -	BOM/Route	<u> </u>	Hardwa		-	Over/Under	⊢	Temperature/Cure
	-	Cracks ·	a · .		<u> </u>	Broken/Damaged	-	4	on Incomplete		Part Incorre	├	Weld
	-	Crushed/0	Crimped.			Burrs	-	4	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
Cuffs				<u> </u>	Contamination	-	Mainte		<u> </u>	Part Moved			
		Heat Trea			ļ	Countersink	\vdash	Mislabe		ļ	Positioned V		–
		Inspection		lube	_	Cut Too Short	-	Misread		L	Power Loss/	Surge	Other
	\vdash	Ripples in			ļ	Drill Holes	\vdash	Offset			****		
	j [Torque W	'aves in E	xtrusio	n	Drawing		Out of C	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:48 AM

Work Order ID: 87941

Parent Item:

MS21043-6

D3493-1

D350-636-011

Parent Item Name: Skidtube LH

87941

No

D350-636-011

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

558,0000

Each

MS21043-6

Purchased

Manufactured No Location Loc Qty FG 20 103693 20 ST301 538 117887 2 118384 36 120308 500 250 Each

230

83.0000 **

Loc Code

Location Loc Qty Loc Code ST050 83 77573 1 82023 2 83097 80

NCR:	Yes	/ No				WORK ORDER NON-C	.Or	NFORI	MANCE / UP	DATE					
									- · · · · · · · · · · · · · · · · · · ·		QA Closed:	Date:	· ·		
Work Ord	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS							
***************************************						Rework	Skid-tube Crosstube				Water Jet	Engineering .			
Part I	۱o					Scrap			Machining	Small Fab	4	d. Eng. Coor.	Quality		
						Use-as-is	Thermoforming			Finishing	Rec/Sto	re/Packaging	Other		
NCR I	۱o					Work Order Update			Large Fab	Composite]	Supplier			
Root		· =•			Descri	ption of work order update		nitial	Act	tion	Sign &				
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector		
Doc/Data															
Equip/Tooling	Ц														
Operator	Ш														
Material	Ц														
Setup	Ш														
Other	Щ														
Process	Ц					•									
Supplier	Щ														
Training	Н														
Unapproved				<u> </u>			<u> </u>				<u> </u>				
1 4*							AUL	T CATE	GORY				<u>.</u>		
Landi						General	_	la		_	1	_	∃ 5 . (5		
	-	Bending Centre No	. + C			Bend BOM/Route	-	Grain Hardwa		<u> </u>	Ovalized	.	Pressure/Forced		
	-	Cracks	t Concer	ונווכ נט	⁻	Broken/Damaged	\vdash	ł		<u> </u>	Over/Under Part Incorred		Temperature/Cure Weld		
			rimpod			•		1	on Incomplete ions Incomplete/l	Inclose	Part Incorrec	 	Wrong Stock Pulled		
	Crushed/Crimped. Burrs Cuffs Conta			Contamination		Mainte		- Inclear	Part Moved	12211.IR					
		Heat Trea	+		-	Countersink		Mislabe		<u> </u>	Positioned V	Mrong			
	$\boldsymbol{\vdash}$			Tube		Cut Too Short	-	Misreac		<u> </u>	Power Loss/		Other		
					Drill Holes		Offset	ı	L	J. Ower 2033/		Totalei			
├ ── │ `					Drawing	\vdash	i	`alibration							
Turning Sequence						Finish	_	Out of Calibration Out of Sequence							

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

July-19-12 11:42:48 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941

D350-636-011

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

MS21083C8

Purchased

Purchased

No

250

Each

72.0000

Locatio	<u>n</u>	<u>Le</u>	oc Qty	Loc Code				
304			17					
	121185		14					
	121349		3				<u></u>	
FP002			1					
	115884		1					
ST303			4					
	115884		0					
	118077		1					
	119309		2					
	119638		1					
ST321			50					0
	122141		50					//
		250	Each	63.0000		2	2	
					**		12/8/205	

AN8C21A

Location	Loc Qty	Loc Code
ST343	63	
118758	3	
121275	10	
122204	50	

											DQA:	Date:	•
NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFORM	MANCE / UPI	DATE			•
											QA Closed:	Date:	
Work Ord	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	,
Part I	No. ₋					Rework Scrap Use-as-is Work Order Update Rework Skid-tube Machining Small Fab Thermoforming Large Fab Composite				-	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other	
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved			,										
							AUL	T CATE	GORY				
Landi	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend				o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misread	on Incomplete ions Incomplete/U nance led	Jnclear	Ovalized Over/Under Part Incorre Part Lost/Mi Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	1	kippies in	Bena		ļ	Drill Holes	1	Offset					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-19-12 11:42:48 AM

Work Order ID: 87941

Parent Item:

D350-636-011

Parent Item Name: Skidtube LH

87941 *D350-636-011*

Start Date: 19/07/2012

Required Date: 02/08/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

*NAS1515H3I *

Purchased

No

230

Each

307.0000

**

H- 11/08/

Location	Loc	e Qty	Loc Code		
FG		40			
102472		40			
ST277		267			
118686		3			
120360		11			
121556		53			
122151		200			_ V J_
	250	Each	22.0000	l	1
				**	E

D2741

Manufactured No

Manufactured

No

Location Loc Qty Loc Code ST -10 ST466 32 71856 1 83135 21 250 Each 10.0000

**

Location Loc Qty Loc Code ST053 10 83319 10

D3532-1

Spacer

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORM	MANCE / UP	DATE			
											QA Closed:	Date	•
Work Ord	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	•
Work Ord	· -					Rework	7		Skid-tube	Crosstube	1	Water Jet	Engineering .
Part I	No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-					Use-as-is	1		noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	No.					Work Order Update			Large Fab	Composite]	Supplier	
Root					Descri	ption of work order update	1	Initial	Act	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Cł	nief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling	Ш												
Operator													
Material	Ш												
Setup	Ш												
Other	Ш												
Process	Ш		·								ļ		
Supplier													
Training	Ш											1	
Unapproved													
				- · · .		F	AUI	LT CATE	GORY				
Landi	ng G	ear				General		_			_		
		Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre Not Concentric to O/S					BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks					Broken/Damaged	:	Inspecti	on Incomplete	L	Part Incorre	ct	Weld
	Crushed/Crimped					Burrs		Instruct	ions Incomplete/I	Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs					Contamination		Mainte	nance		Part Moved		
	Heat Treat					Countersink		Mislabe	led		Positioned \	_	
		Inspection	n Strip in	Tube		Cut Too Short	Misread			Power Loss/	'Surge	Other	
		Ripples in	Bend			Drill Holes		Offset		_	_		

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

QTY QTY QTY -042 -043 -044 PART NUMBER DESCRIPTION D2750-041 350 SKIDTUBE ASSEMBLY, LH D2750-042 350 SKIDTUBE ASSEMBLY RH D2750-043 350 SKIDTUBE ASSEMBLY, LH X D2750-044 350 SKIDTUBE ASSEMBLY RH D2739 WEB SPACER 8 8 D2743 8 1 1 1 D2744 CAP 8 D2745 BUS! IING 8 8 8 D2750-1 SKIDTUBE WELDMENT, LH D2750-2 SKIDTUBE WELDMENT, RH D2750-3 SKIDTUBE WELDMENT LH D2750-4 SKIDTUBE WELDMENT, RH D3488-041 BLADE FITTING, LH D3488-042 BLADE FITTING, RH 4 4 4 4 D3490-1 SPACER 4 4 D3490-3 SPACER 4 D3490-5 SPACER PLUG ASSEMBLY 8 8 8 8 D3492-041 D3492-043 PLUG ASSEMBLY 8 8 8 D3492-045 PLUG ASSEMBLY 1 1 D3535-25 WEARSHOE D3536-25 GASKET 3 D3537-1 Æ WEARPAD 3 3 8 8 D3631-1 WASHER D3791-1 WEARPLATE 1 1 D3793-1 WEARSHOE 1 1 D3793-3 WEARSHOE Æ 1 1 1 D3794-1 GASKET D3794-3 GASKET INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225) ALS4-1032-225 <u>/</u>F\-34 34 AN3C5A BOLT 34 34 4 4 AN3C6A BOLT 4 4 AN6C44A BOLT 1 AN8C35A 1 1 BOLT 38 38 38 38 AN960C10L WASHER 1 AN960C816L 1 1 WASHER 4 4 4 4 MS21043-6 NUT 1 1 1 MS21083C8 NUT 4 4 4 NAS1515H3L

SHOP COPY RETURN TO **ENGINEERING** UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER MLJ 12/07/19

DESIGN	ואפ	DART AEROCRACE	IIC A	INC
REV	Di	ESCRIPTION	BY	DATE
Α	NEW ISSUE		DS	98 04 16
В	CHANGE MS24694-S293	TO AN8-16A	CP	98.09 01
С	ADD D2750-3/D2750-4, IP	CORPORATE D2738 AND D2740	CP	98.11.18
D	ADD HOLES AND SHACE INCORPORATE DEC 913	ERS FOR APICAL FLOATS, 03/9157	₽H	06 01 05
E	REMOVE QTY (38) NAS1	, CHANGE INSERTS, ADD D3631-1, 515H3L, REMOVE QTY (10) D2741, QTY (2) AN960C816.	СВ	07 05.17
F	(8 PL), WEARSHOE HAR	TY (5) (ZN C8-1), 3535-13-35 (ZN C8-1), 3536-13/-35 (ZN B8-1) DER FWDIAFT SADDLE REMOVED DWARE QTY UPDATED (ZN B8-1); ARE UPDATED (ZN C1-8, 9, 10, 11), N A6-1).	РН	08 07 16

DESIGN	PG,	DART AEROS	PACE USA	INC.
DRAWN	REH		ADLOCK, WA	
CHECKED	بالم	DRAWING NO.		REV. F
MFG. APPR.	AKC.	D2750	ş	SHEET 1 OF 11
APPROVED	1.54	TITLE		SCALE
DE APPR.	4	350 SKIDTUBE	ASSEMBLY	NTS
D.80	7.16	COPYRIGHT © 1998 B THE DOCUMENT B PRINTE AND COMBENTA NOT TO BE USED FOR ANY PURPOSE OR COM		S OUT THAT HOUSE COOR I

GENERAL NOTES:

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В

MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).

... ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB. POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.5 BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).

WASHER

TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

UNITS: INCHES UNLESS OTHERWISE NOTED

BREAK SHARP EDGES N/A

IDENTIFICATION N/A WEIGHT, D2750-041/-042/-043/-044 = 26.5 LBS

WELD PER DART QSI OUR
INSTALL ALSA-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (Ø 0.297) FOR WEARSHOE INSERTS
FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI

SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF

POWDER COATING WITH MEK DEGREASER.
SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL ESPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

											DQA:	Date	:	
NCR:	Yes	/ No				WORK ORDER NON-C	OI	NFORM	MANCE / UPDA	TE	•		,	
											QA Closed:	Date	•	
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	•	
Part I	No.					Rework Scrap Use-as-is Work Order Update		Therm	Machining noforming	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other	
						· L	1			· <u></u>				
Root					Descri	ption of work order update		Initial	Action	١	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Descript	ion	Date	Verification	QC Inspector	
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Equip/Tooling	Ш													
Operator														
Material	Ш													
Setup	Ш													
Other	Ш						•							
Process	Ш						}							
Supplier	Ш				ļ.			,						
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						·	AUL	T CATE	GORY					
Landi	_				_	General		,			i	_	_	
	-	Bending				Bend	<u></u>	Grain			Ovalized	<u> </u>	Pressure/Forced	
						BOM/Route	<u></u>	Hardwa	re		Over/Under	tolerance	Temperature/Cure	
						Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct _	Weld	
	Crushed/Crimped.					Burrs		4	ions Incomplete/Unc	 	Part Lost/Missing		Wrong Stock Pulled	
	Ш	Cuffs				Contamination		Mainte	nance		Part Moved			
	Ш	Heat Trea	t			Countersink	Mislabeled				Positioned Wrong			
		Inspection Strip in Tube							1		Power Loss	Surgo	Other	

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

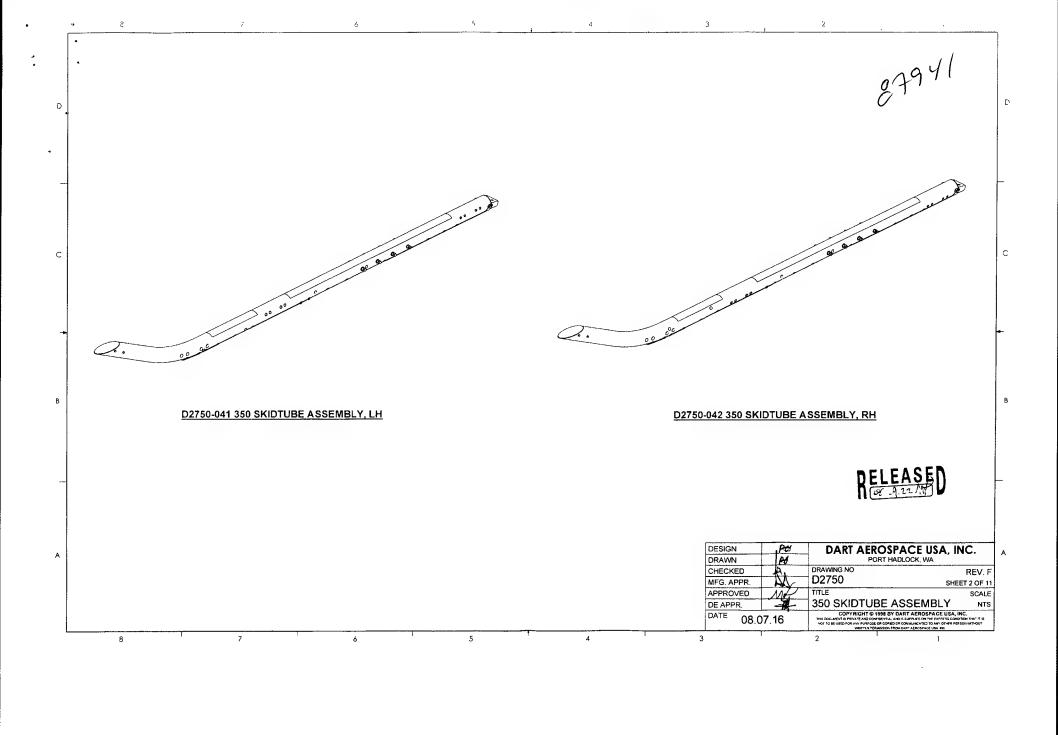
Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish



											DQA:	Da	te:	
NCR:	Yes / N	o			WORK ORDER NON-	CO	NFORM	MANCE / UPI	DATE		DA Clasadi	Do	+0:	,
	•••			• • • • • • • • • • • • • • • • • • • •	T						QA Closed:	Da	te:	<u></u>
Work Ord	or·				DISPOSITION				AGAINST D	EΡ	ARTMENT	/PROCESS		•
Work Ord			······································		Rework	7		Skid-tube	Crosstube	٦		Water Jet		Engineering .
Part f	No				Scrap	1	ı	Machining	Small Fab	1	Pro	d. Eng. Coor.		Quality
					Use-as-is		Therm	noforming	Finishing		Rec/Stor	re/Packaging		Other
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Root				Descri	ption of work order update		Initial	Act	ion	T	Sign &			
Cause	Date	e Step	Qty	(or Non-conformance	Cł	nief Eng	Desci	ription		Date	Verificatio	n	QC Inspector
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	Cracks Broken/Damaged Inspection Incomplete							on Incomplete		P	art Incorred	ct		Weld
	Crushe	d/Crimped	_		Burrs		Instruct	ions Incomplete/l	Jnclear	P	art Lost/Mi	ssing		Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		_]p	art Moved			
	Heat T	reat			Countersink		Mislabe	led	Γ	P	ositioned V	Vrong		_
	Inspec	tion Strip ir	ı Tube		Cut Too Short	Misread] P	ower Loss/	Surge		Other	
	Ripple	in Bend			Drill Holes		Offset			_				

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

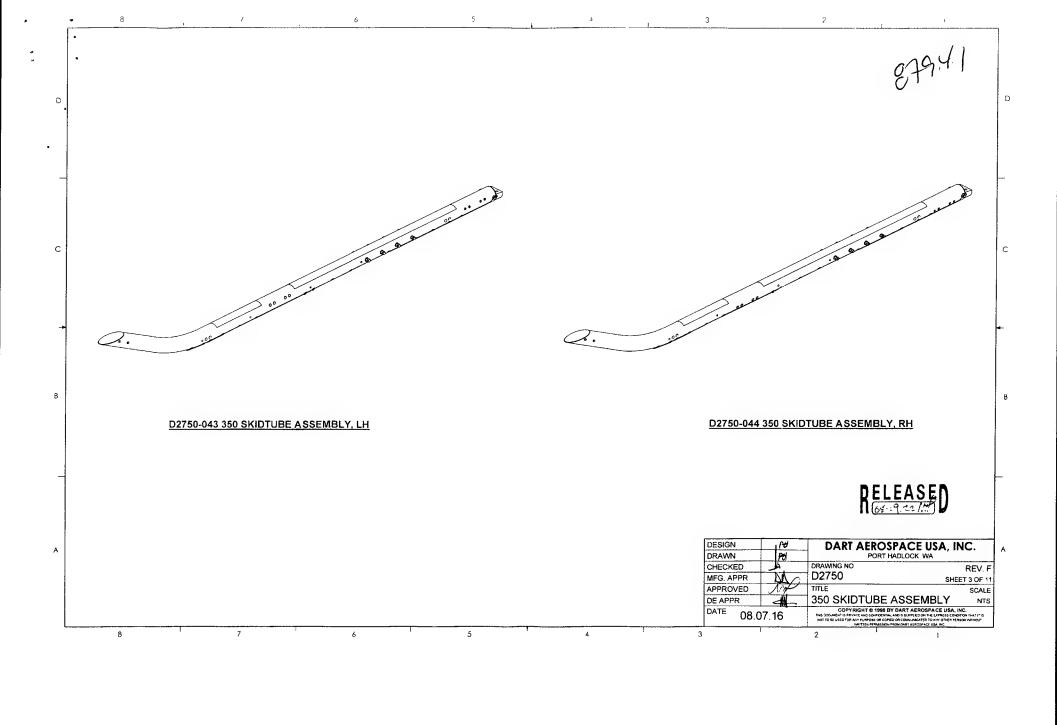
Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish



NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
		•							•		QA Closed:	Date	•
Work Ord	er: _					DISPOSITION	_				EPARTMENT	_	
Part I NCR I	-				·	Rework Scrap Use-as-is Work Order Update		1 Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other
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Root Cause		Date	Step	Qty		ption of work order update or Non-conformance		Initial nief Eng		ction cription	Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								LT CATE	CORY				
Landi	ne G	ear				General	AUI	LICAIE	JONT		···-	,	
Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend					o/s	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		-	on Incomplete ions Incomplete nance led	/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	│	Torque W	aves in F	xtrusio	,	Drawing	Out of Calibration						

Out of Sequence

Outside Dimensions

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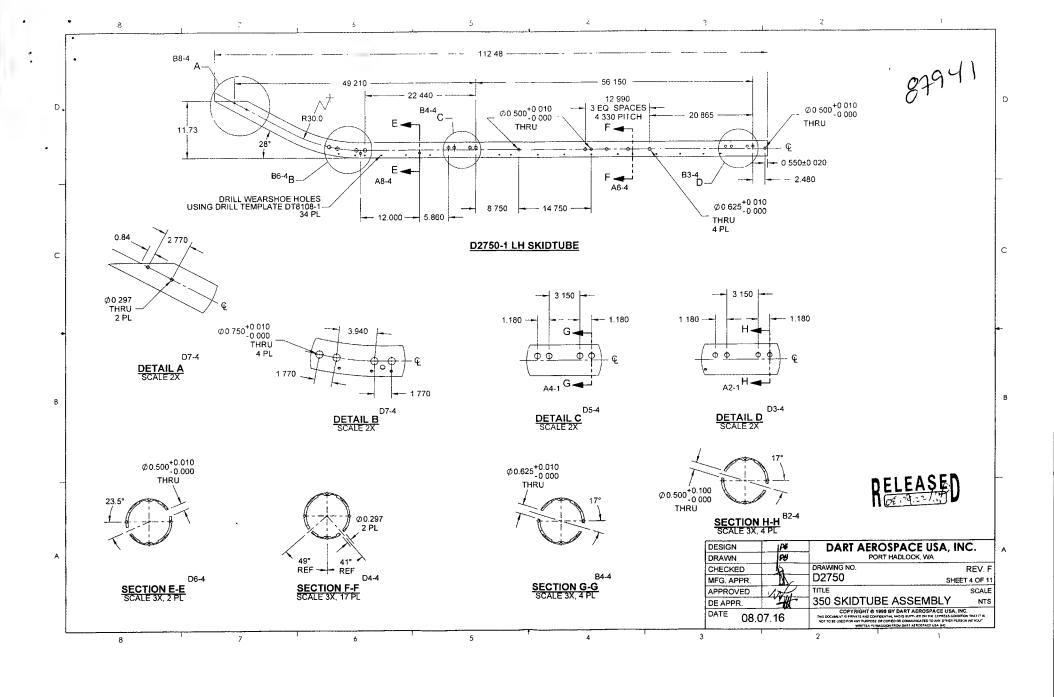
Date:

Turning Sequence

Wave/Twist in Tube

Finish

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NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
											QA Closed:	Date	:
Work Ord	ler: _					DISPOSITION				_	EPARTMENT		
Part NCR	-					Scrap Machining Small Use-as-is Thermoforming Finish				Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other
11011						Work Order Opudie			20186 100	composite			
Root Cause		Date	Step	Qty		otion of work order update or Non-conformance	- 1	Initial hief Eng		ction cription	Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								LT CATE	CORV				
Landi	ng Ge	ar				General	FAU	LICAIL	3081				
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Wayes in Extrusion					Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread	on Incomplete ions Incomplete, enance eled	/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	I IT	oralle W	aves in F	xtrusion	1	Drawing	ı	lout of C	alibration				

Out of Sequence

Outside Dimensions

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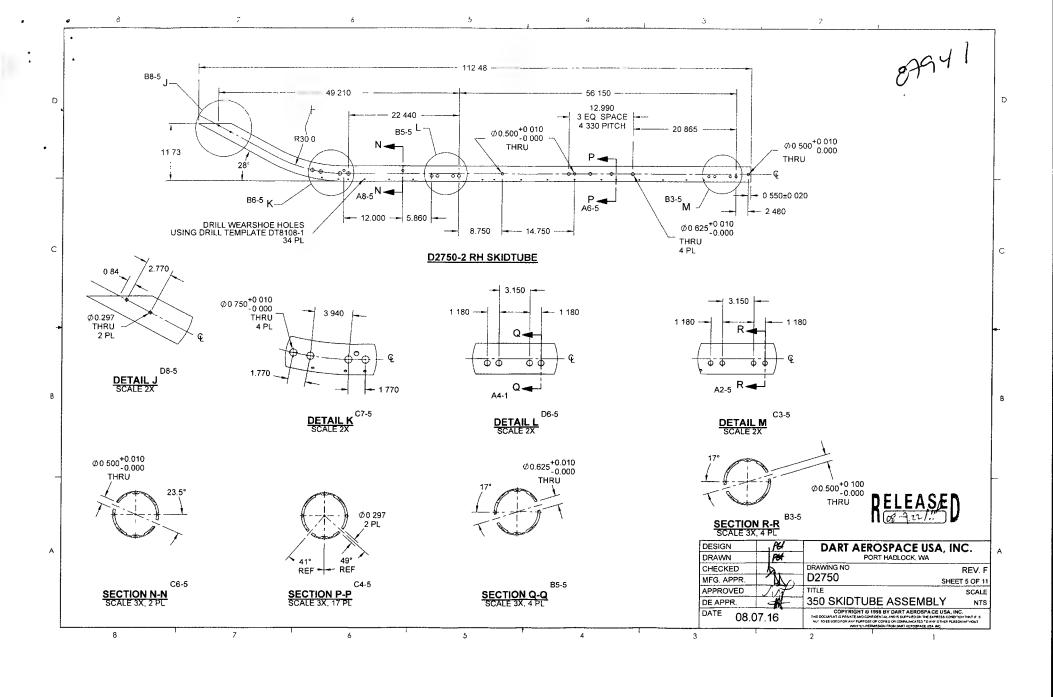
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Turning Sequence

Wave/Twist in Tube

Finish Folio

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											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFORM	MANCE / UPDATE				•
-									<u> </u>		QA Closed:	Date	:
Work Ord	er.					DISPOSITION			AG	AINST DE	PARTMENT	/PROCESS	•
Part I	No					Rework Scrap Use-as-is Work Order Update	Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite				ŧ	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering . Quality Other
Root						ption of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Cr	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
				· · · · · · ·			AUL	LT CATE	GORY				
Landi	ling Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat					General Bend BOM/Route Broken/Damaged Burrs Contamination		Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance			Ovalized Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	\vdash			Tubo		Countersink Cut Too Short	-	Mislabe			Positioned Wrong Power Loss/Surge		Other
	Inspection Strip in Tube Ripples in Bend					Drill Holes	Misread Offset				I comer ross/	Juige	Totilei

Out of Sequence

Outside Dimensions

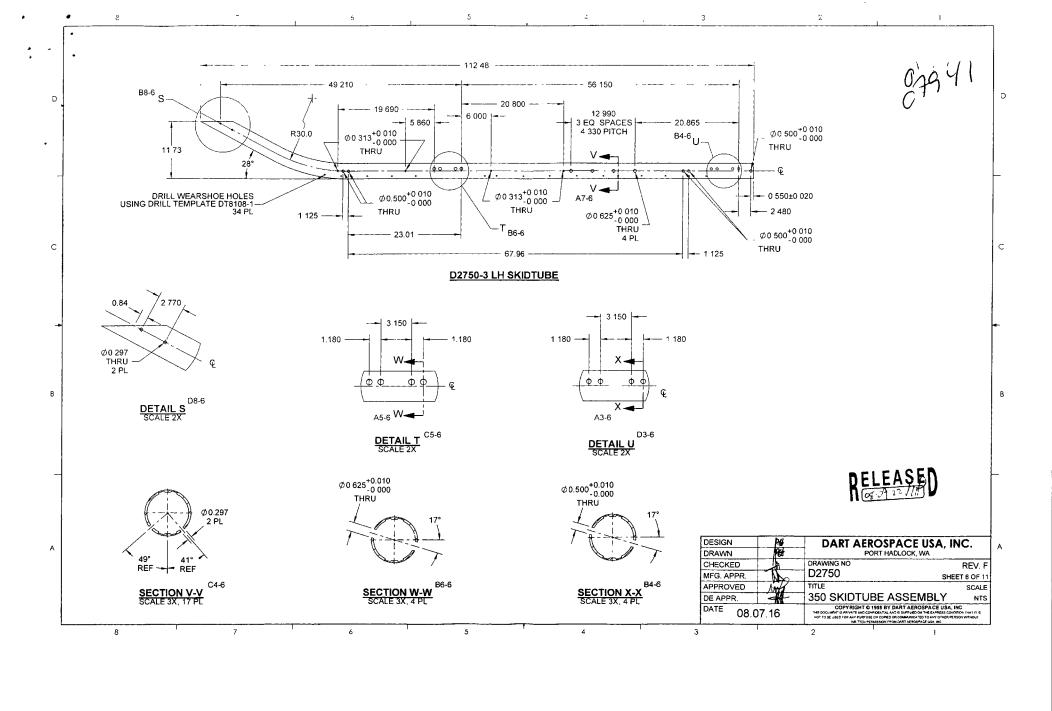
Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish



										DQA:	Date:	
NCR:	Yes / No				WORK ORDER NON-O	COI	NFORM	MANCE / UPD	ATE			•
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144I- OI					DISPOSITION				AGAINST DE	PARTMENT,	PROCESS	•
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	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre N	lot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	t	Weld
	Crushed/Crimped.				Burrs		Instruct	ions Incomplete/U	nclear	Part Lost/Missing		Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved		
	Heat Tre	at			Countersink		Mislabe	led		Positioned Wrong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

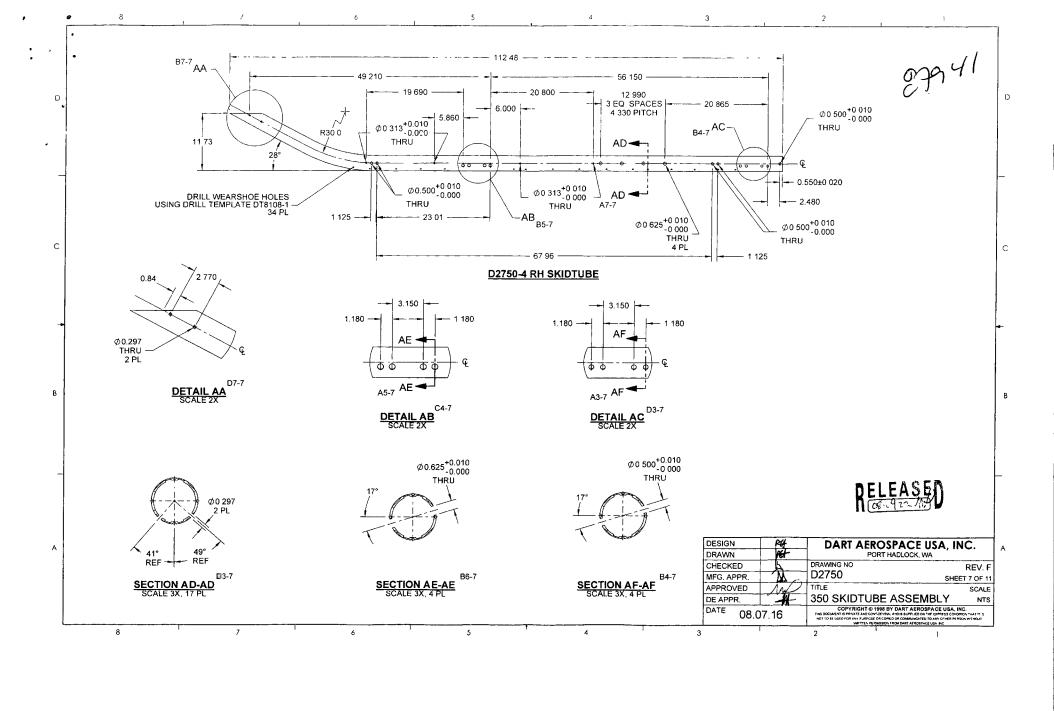
Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish



											DQA:	Da	ite:	
NCR:	Yes / N	0			WORK ORDER NON-O	COI	NFORM	MANCE / UF	PDATE			- · · · · · · · · · · · · · · · · · · ·		•
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	l linenge	tian Strin ir	Tuho	ı	Cut Too Short	Microad					Power Loss/	Surge	1	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

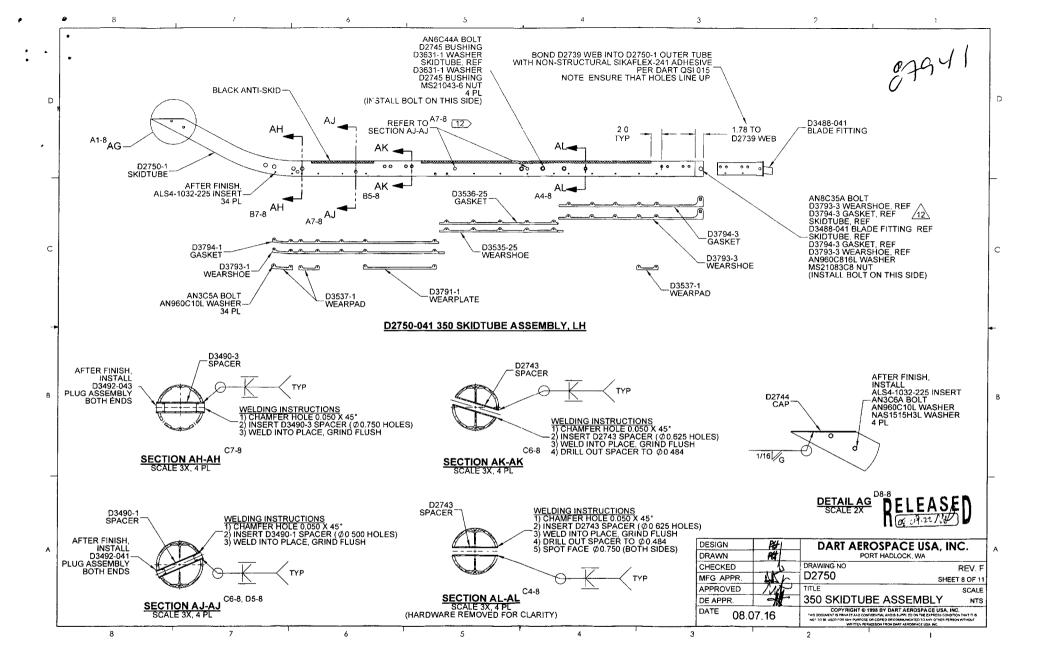
Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



										DQA:	Date:	
NCR:	Yes / No				WORK ORDER NON-	CO	NFORM	MANCE / UP	DATE	,		>
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WOIK OIG					Rework	7		Skid-tube	Crosstube	1	Water Jet	Engineering .
Part f	Vo.				Scrap	+		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					1			noforming	Finishing	4	re/Packaging	Other
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	Bending			Bend		Grain			Ovalized		Pressure/Forced	
i	Centre Not Concentric to O/S			BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure	
	Cracks			Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct	Weld	
	Crushed/	Crimped.			Burrs		Instructi	ions Incomplete/l	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved		
	Heat Tre	at			Countersink		Mislabe	led		Positioned V		
	Inspection	n Strip in	Tube		Cut Too Short		Misread			Power Loss/	Surge	Other
	Ripples in Bend				Drill Holes		Offset					

Out of Sequence

Outside Dimensions

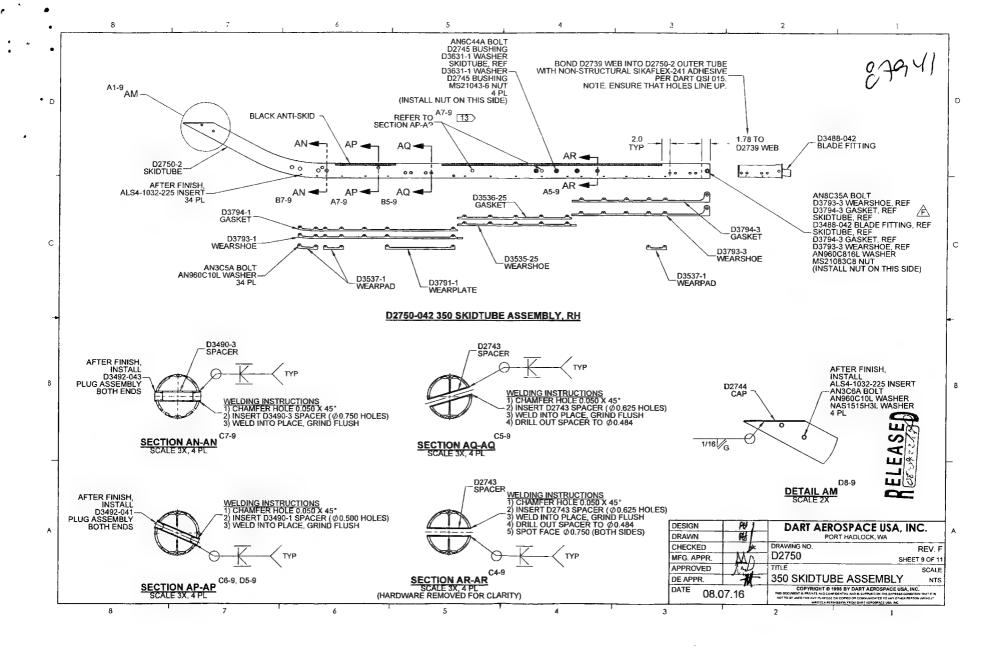
Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish



										DQA:	Date:	
NCR:	Yes / No				WORK ORDER NON-	COI	NFOR	MANCE / UPDA				•
										QA Closed:	Date:	
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VVOIKOIU	ei				Rework	Skid-tube Crosstube				Water Jet	Engineering	
Part I	No				Scrap	1		 	Small Fab	Proc	d. Eng. Coor.	Quality
, ,,,					Use-as-is	1	2	noforming	Finishing		e/Packaging	Other
NCR I	No				Work Order Update]		· —	Composite	•	Supplier	
Root]		Descri	ption of work order update		Initial	Action	1	Sign &		
Cause	Date	Step	Qty	1	or Non-conformance	Ch	nief Eng	Descripti	ion	Date	Verification	QC Inspector
Doc/Data		1					-					
Equip/Tooling												
Operator			İ									
Material												
Setup												
Other												
Process			ļ									
Supplier												
Training		-										
Unapproved						<u>L</u>						
						AUL	T CATE	GORY				· · · · · · · · · · · · · · · · · · ·
Landi	ng Gear				General		7				_	٦
	Bending				Bend		Grain		<u> </u>	Ovalized	_	Pressure/Forced
	Centre Not Concentric to O/S				BOM/Route	-	Hardwa			Over/Under		Temperature/Cure
	Cracks				Broken/Damaged	-	4 '	on Incomplete		Part Incorred		Weld
	Crushed/	Crimped.			Burrs		-{	ions Incomplete/Uncl		Part Lost/Mi	Wrong Stock Pulled	
	Cuffs				Contamination		Mainte			Part Moved		
j	Heat Trea	at		į	Countersink		Mislabe	led	1 1	Positioned W	/rong	

Misread

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

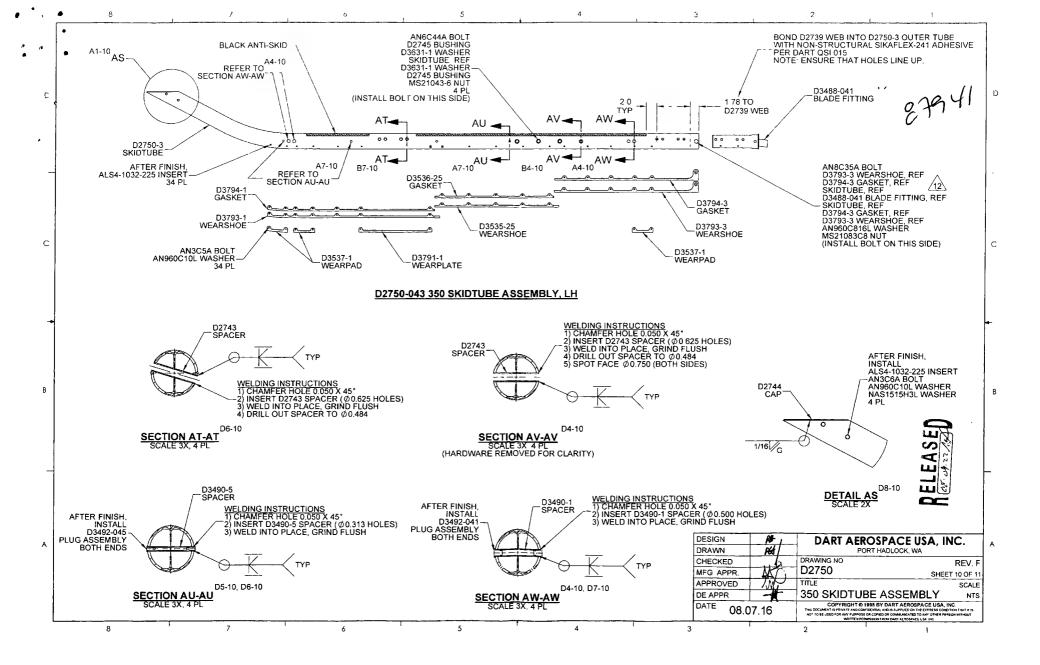
Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish



										DQA:	Da	te:	•
NCR:	Yes / No				WORK ORDER NON-CONFORMANCE / UPDATE						-	_	• .
	,									QA Closed:	Da	te:	
Work Ord	or·				DISPOSITION AGAIN					PARTMENT	/PROCESS		2
WORK OIG	C1.				Rework	7		Skid-tube	Crosstube	1	Water Jet		Engineering .
Part I	No.				Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	П	Quality
					Use-as-is			noforming	Finishing	Rec/Sto	re/Packaging		Other
NCR I	Vo.				Work Order Update			Large Fab	Composite		Supplier		
										,			
Root					ption of work order update	1	Initial	Acti		Sign &	Δ.		
Cause	Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Descri	ption	Date	Verificatio	n	QC Inspector
Doc/Data													
Equip/Tooling		}											
Operator												l	
Material													
Setup													
Other												- 1	
Process													
Supplier													
Training							:	ī					
Unapproved										<u> </u>			
,					F	AUL	T CATE	GORY					
Landi	ng Gear				General		_						
	Bending				Bend		Grain			Ovalized			Pressure/Forced
	Centre Not Concentric to O/S				BOM/Route		Hardwa	re		Over/Under	tolerance		Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct		Weld
	Crushed	Crimped.	-		Burrs		Instruct	ions Incomplete/U	nclear	Part Lost/Mi	ssing		Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

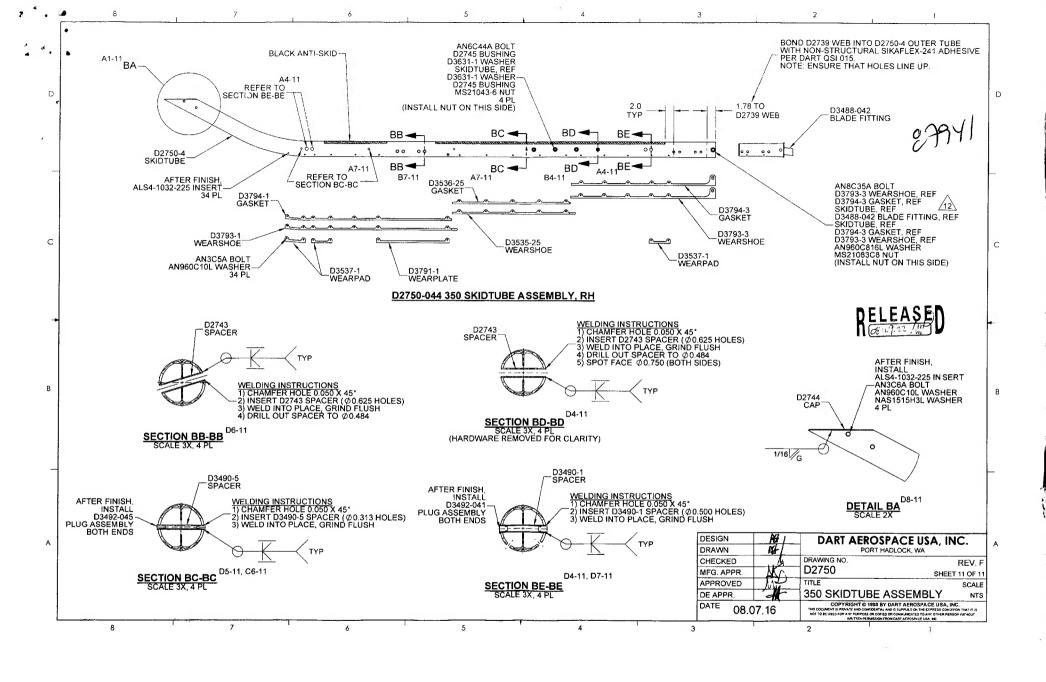
Countersink

Cut Too Short

Drill Holes

Drawing

Finish



											DQA:	De	ate.		
NCR:	Yes / No				WORK ORDER NON-	co	NFORI	MANCE / UPD	ATE		QA Closed:		ate:	3 • •	
Work Ord	or				DISPOSITION				AGAINST [AGAINST DEPARTMENT/PROCESS					
Work Order: Part No. NCR No.				Rework Skid-tube Crosstube Scrap Machining Small Fab Thermoforming Finishing Work Order Update Large Fab Composite				Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier			Engineering Quality Other				
Root				Descri	ption of work order update		Initial	Acti	on		Sign &				
Cause	Date	Step	Qty	(or Non-conformance	CI	nief Eng	Descri	ption		Date	Verification	วท	QC Inspector	
Doc/Data														*	
Equip/Tooling					,			,							
Operator						1									
Material															
Setup			l			İ							1		
Other			1.2								Ξ				
Process	Π,			ı.											
Supplier				ļ											
Training						1									
Unapproved															
					F	AUI	LT CATE	GORY							
Landi	ng Gear				General		_				-			10.0	
	Bending				Bend		Grain				Ovalized			Pressure/Forced	
	Centre N	lot Conce	ntric to	o/s	BOM/Route		Hardware				Over/Under	tolerance		Temperature/Cure	
	Cracks				Broken/Damaged		Inspecti	on Incomplete			Part Incorred	:t		Weld	
4	Crushed	/Crimped.			Burrs		Instruct	ions Incomplete/Ui	nclear		Part Lost/Mi	ssing		Wrong Stock Pulled	

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

Part Moved

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

NO. 300

AWS D17.1.2001 QUALIFICATION TEST RECORD

Name: Barday Elliott	
Job#: 87941	
Part#: <u>0350-636-011</u>	
Description: Seed	197
Welding Process: Tig[\(\frac{1}{2} \) Mig[]	
Base materiel: Alum,	
Current: AC[\rightarrow DC[]	

TEST REQUIREMENTS AND RESULTS

Visual:	pass[1]	fail[]
Incomplete Penetration:	pass[/]	fail[]
Incomplete Fusion:	pass[]	fail[]
Cracks:	pass[/]	fail[]
Overlap (cold lap)	pass[']	fail[]
Undercut:	pass[]	fail[]
Pin holes:	pass[]	fail[]
Porosity (surface):	pass[/	fail[]
Coloration:	pass[]	fail[]
Burn through:	pass[]	fail[]

Qualifier Devil Acus Date of Test Coupon 12.07.26

Welder Barely Ellwet Date of Test Coupon 12-07-26

The above named individual is qualified in accordance with AWS D17.1.2001 to weld